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REMOTE SENSING OF COASTAL POLLUTANTS

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Remote Sensing of Coastal Pollutants

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Economic pressures to extract oil, dispose wastes, increase the harvest of food and recreational development in the coastal zone are creating the need to better understand the environmental changes taking place in many estuarine and coastal areas. The advantages and limitations of remote sensing techniques for collecting synoptic data over large coastal areas are reviewed with emphasis on low-cost, reliable methods. Specific applications include mapping the environmental impact of land development on coastal vegetation and ecology; charting current circulation and shoreline erosion; monitoring the dispersion of pollutants such as oil and sewage sludge; and determining the turbidity and eutrophication levels of water. The analysis of aircraft and satellite data with the aid of ground truth is illustrated, employing both inexpensive manual and automated computer techniques. Results indicate that a coordinated satellite-aircraft-boat approach can produce better results and/or cost less than the deployment of large numbers of boats or field teams without remote sensor support.